

REMARKS

The specification has been amended to reference the parent patent application and the title has been amended to correspond to the pending method claims.

There is no indication that the formal drawings have been approved. Applicant respectfully requests an indication that the formal drawings are approved with the next Office Action.

The rejection of Claim 12 under 35 USC §112, first paragraph, as not complying with the written description and the enablement requirement has been considered. Claim 12 has been amended to recite a "wristband" rather than a strap, and a "switch" instead of a strap sensor. The wristband and switch are disclosed at page 7 of Applicant's specification. Therefore, reconsideration and withdrawal of the rejection of Claim 12 under 35 USC §112, first paragraph, is respectfully requested.

The rejection of Claim 7 under 35 USC §112, second paragraph, as being indefinite has been considered. Claim 7 has been amended to recite an activation signal having an activation code and a continuous signal that follows the activation code signal. Claim 7 further recites that the signal received by the receiver is monitored to generate a received signal. Thus, the "received signal" is clearly different than the earlier recited signals. Therefore, reconsideration and withdrawal of the rejection of Claim 7 under 35 USC §112, second paragraph, is respectfully requested.

The rejection of Claims 7-11 and 13-15 under 35 USC §102(b) as being anticipated by WO 98/04880 publication to Riener (equivalent U.S. Patent No. 6 510 642 will be referenced in the rejection) has been considered.

Preliminary to a discussion of Riener and Applicant's claimed invention, it is noted that the identification device 16 of Riener is mounted on a weapon. Applicant's identification device or mechanism is located away from the weapon and worn by a person designated to use the weapon.

Thus in the following discussion there will not be a one-to-one correspondence between the identification devices.

Riener also discloses securing a firearm by locking the firearm in a case or mount and controlling a safety device to prevent firing of the weapon. The identification device 11 controls locking devices 9, 10 to permit removal of the firearm from the case.

Riener also discloses locking devices 14 located in the firearm to prevent discharge. The identification device 16 on the firearm has a transmission and/or receiving unit 20 for exchanging identification data with a transmission and/or receiving unit 19 worn by a user. Figure 2 shows a transponder 38 including the transmission and/or receiving unit 19 that is worn by the user. The transmission device 26 of the identification device 16 transmits an electromagnetic field 24 to power the transponder 38.

Figure 3 of Riener shows the identification device 16 mounted to a rifle. Returning to Figure 2, the identification device 16 includes a transmission device 26 with an antenna 31 for transmitting an identification code 30 to the transponder 38 having a transponder circuit 19 and a microcontroller 25 for controlling the transmitting of signals back to the identification device 16. The transmitted signals control release and/or locking of the weapon.

Riener discloses sending an identification code 30 from the identification device 16 mounted on a weapon to the transponder 38 mounted on a watch band. Column 11, lines 33-52 discloses a distance measuring device 37 that sends out an ultrasonic signal and from the delayed return of the ultrasonic signal calculates the distance to the other end of the reflective surface. Column 11, lines 32-39 of Riener also disclose detecting the distance between the identification device and the receiving unit 20 depending on the intensity of a received signal. Column 11, lines 11-22 discloses having the electromagnetic alternating field 24 if weak, such as at a predetermined distance, not enabling the transponder to return

a signal. Thus if a predetermined distance between the firearm and the transponder is exceeded, the weapon will be deactivated.

Column 11, lines 59-65 of Riener discloses utilizing the transponder with jewelry such as a ring, watch strap, watch housing, belt buckle or the like.

Column 18, lines 51-54 of Riener discloses using other identifying characteristics, such as finger prints, face shape or hand shape to check authorization and enable the weapon.

Column 10, lines 45-56 of Riener discloses a "handshake" embodiment using random code transfer. An encoding algorithm guarantees identical loop count runs in the encoding and decoding routines. Thus the encoded activation code is sent to the identification device at least periodically to maintain the weapon in an activated state.

Column 18, lines 46-49 of Riener discloses that the system is disabled when unknown identification codes are received. Further, an alarm can signal a user when interference prevents removal of a firearm from a stored location and/or firing of the firearm.

In conclusion, the method of Riener deactivates the locks to enable firing of the weapon only when (1) the unique identification codes are exchanged between the transponder attached to the user and the transponder attached to the weapon, and (2) the transponder of the user is within a prescribed distance from the identification device mounted to the weapon.

As to the present invention, Applicant's method permits activation only in response to receipt of a proper identification code, but then maintains the weapon in the active state if the strength of the received signal monitored by the processor is at or above a minimum signal strength, regardless of the frequency of the received signal or the presence/absence of the activation code in the received signal. This method avoids a deactivation of the readiness of the weapon to fire by an interfering transmitter. Therefore

weapon activation can not be disrupted by stray or separate transmitters utilized by a person trying to disable the user's ability to fire the weapon.

As discussed above, column 10, lines 45-56 of Riener discloses an embodiment with encoded signals that includes identical loop count runs. Thus the transmitted and received signals must be transmitted at least periodically to maintain the weapon in the activated state. In other embodiments, the signals merely are not specially encoded, but presumably must also be sent periodically or continuously to maintain the firearm in the activated state.

As discussed above, column 18, lines 46-49 of Riener discloses disabling the weapon and providing an alarm when unknown identification codes are received. Thus the system of Riener clearly will not maintain the firearm in an operating state when interference is provided so that the identification code is not received or recognized.

For the above reasons, Claim 7, and Claims 8-11 and 13-15 dependent therefrom, are allowable over Riener.

Further, dependent Claims 8-11 and 13-15 include other features that further distinguish Riener. For example, Applicant's Claims 13 and 14 recite that "a radio signal comprises the activation code signal and the continuous signal". The Office Action relies on column 9, lines 32-37 of Riener to disclose this feature. However, column 9, lines 32-37 discloses the use of a wireless locking device 14 mounted on the firearm that is provided with a wireless connection to an identification device (on a weapon) that is preferably line-connected/mounted to locking devices provided with a mount or housing for the weapon. Thus, the wireless radio signal recited in column 9, lines 32-37 of Riener is not utilized for the purpose recited in Applicant's Claim 14, and is utilized as part of a wireless locking feature for a lock on a housing not claimed or disclosed by Applicant.

Applicant's Claim 15 recites that "the transmitted and the received signal are selected from the group consisting of

infrared signals and ultrasonic signals". This feature is not believed present in Riener. The Office Action references column 11, lines 47-52 of Riener for a teaching of this feature. The disclosure of ultrasonic signals in column 11 of Riener, however, is related to a distance meter which utilizes a reflection of the ultrasonic signal to provide a distance measurement. The ultrasonic signal is not used to transmit an activation code signal.

Added Claims 16-19 depend from Claim 7 and thus are believed allowable. Claims 16-19 are also believed to further distinguish Riener. Claim 16 recites that "the weapon is free from a transmitter mounted thereon". This embodiment distinguishes Riener, which discloses in Figure 2 both a transmission device outputting electromagnetic field power 24 and a separate transmitter transmitting signals with antenna 31 to the identification device.

Applicant's Claim 17 recites that the continuous signal comprises "an uncoded signal". As discussed above, Riener does not teach receiving an uncoded signal and maintaining the weapon in an operative state after an activation code signal stops. Rather, Riener disables the weapon and provides an alarm when the activation code is not received. The code may be lost due to interference signals or a large distance between the identification device and the firearm.

Applicant's Claim 18 recites "transmitting a readiness signal from the weapon to the identification unit and displaying the state of readiness of the weapon on the identification unit". This feature is not believed disclosed in Riener.

Applicant's Claim 19 recites "providing a wake-up circuit for the receiver attached to the weapon; activating the receiver when the activation code signal is received by the wake-up circuit; and besides deactivating the weapon, deactivating the processor when the strength of the received signal falls below the minimum strength". This claimed arrangement enables a battery or power supply of the receiver

and processor on the weapon to have a longer life due to less battery usage. This feature is not believed to be present in Riener.

For the above reasons, Claims 7-11 and 13-19 are believed distinguishable over WO 98/048802 to Riener.

The rejection of Claim 12 under 35 USC §103 as unpatentable over Riener in view of WO 01/18332 to Funfgelder has been considered. Claim 12 is believed allowable for the reasons set forth above with respect to Claim 7.

The features of Riener have been discussed above. Funfgelder discloses a device for activation of weapons including a bracelet similar to a watch for wearing by a shooter on their shooting hand. A conventionally known finger tip sensor is situated in the watch. The band of the watch has a continuous sensor wire with contact surfaces in the clasp of the band. If the band is cut or the clasp is opened, the weapon is deactivated. The band includes a short-range transmitter for outputting a coded signal or an interrogator. Radio, ultrasound, infrared or induction can be the transmission medium. The weapon includes a receiver to receive the coded signal from the watch band transmitter. A transponder can be provided in the weapon to transmit a response signal. A maximum distance can be maintained precisely by the transit time measurement of the response signal and the firing status of the weapon can be indicated by a display on the wrist band.

The weapon of Funfgelder can only be utilized so long as the coded signal is received. A signal is emitted every hundred milliseconds. If an interfering signal is transmitted, the weapon will be disabled if the coded signal is not detected.

Applicant's Claim 12 recites that "a wristband is attached to the identification unit for holding the identification unit to an individual and the identification unit includes a switch for indicating if the wristband is closed" and "the identification unit includes an

identification unit processor for performing said step of comparing the entered identification code to the stored identification code and the switch is connected to the identification unit processor for actuating the identification unit processor only when the wristband is closed".

There is no motivation, absent Applicant's specification to provide the elements of Funfgelder for the transponder 38 of Riener. Riener discloses providing the transmission/receiving unit 19 in or on a watch. There is no disclosure or suggestion of providing a wire clasp about the watch, with a switch for indicating if the wristband is closed. The watch of Riener has a face piece and a pair of pins receiving the bands on either side of the watch piece. There is no motivation, or easy method to modify the watch of Riener to include a switch to indicate closure of the watch band.

For the above reasons, Claim 12 is believed allowable over Riener and Funfgelder.

Added Claims 20-31 are believed allowable over the applied prior art.

Applicant's independent Claim 20 recites providing an identification unit separate from the weapon and a module on the weapon comprising a receiver with a receiving antenna and a processor, "said module being free from a transmitter". The claimed module corresponds to the identification device 16 illustrated in Figure 2 of Riener. The identification device 16 of Riener includes a transmission device 26 and a distance measuring device 37 transmitting signals.

Claim 20 further recites "maintaining the weapon in the active state when the received signal is at or above a minimum strength even if at least one of the detected frequency received by the receiving antenna is different from the frequency of the uncoded signal and the activation code signal is not received, the received signal comprising one or more of 1) the activation code signal, 2) the uncoded signal, and 3) another signal from another source". Thus, Claim 20 clearly

prevents interference from a transmitter utilized by a person trying to disable the weapon from doing so.

As discussed above, Riener discloses at least periodically sending activation signals to maintain the firearm in an activated state. This differs from Applicant's claimed invention, which maintains the weapon in an active state even when an interference signal is provided.

Claim 23 recites the module including a wake-up circuit and is believed allowable for the reasons set forth above with respect to Claim 19.

Claim 24 recites that "the identification unit is integrated into a wristband, and the identification unit includes a switch for indicating if the wristband is closed, the identification unit detecting an authorized user and transmitting the activation code signal followed by the uncoded signal to place and maintain the weapon in the active state only when the wristband is closed". This claim is believed allowable as there is no reason to provide the switch of Funfgelder with the watch of Riener.

Claim 25 recites that "both the activation code signal and the uncoded signal consist of one of infrared energy and ultrasonic energy". Claim 25 is believed allowable for the same reasons as Claim 15 discussed above.

Claim 26 recites the step of "displaying the name or the picture of the authorized user on an indicator of the identification unit". This feature is not believed to be disclosed or suggested in the applied prior art.

Claim 27 recites that "the method is free from the step of sending any type of signal from the module attached to the weapon to the identification unit". Figure 2 of Riener discloses the transmission device 26 and the distance measuring device 37 transmitting signals to the transponder 38. Thus Claim 27 is believed to distinguish Riener.

Independent Claim 28 recites a method including the step of "maintaining the weapon in the active state so long as the received signal is at or above a minimum strength even if 1)

the detected frequency of the received signal is different from the frequency of the power signal, and/or 2) the activation code is not received, so long as the received signal comprises the minimum strength, even if the minimum strength results from an interference signal provided by another transmitting source". Thus, Claim 28 prevents an interference signal from deactivating the weapon. As discussed above, this arrangement is not believed present in Riener. Furthermore, Funfgelder requires the coded signal from the watch band transmitter to be received and detected to maintain the firearm in a ready to fire state.

Claim 28 further recites that "the module on the weapon is free from a transmitter". As discussed above, Figure 2 of Riener discloses the transmitter device 26 and the distance measuring device 37 outputting signals from the weapon.

Claim 28 further recites "the identification unit being integrated into a wristband and including a switch for sensing if the wristband is closed". This claim is believed allowable as there is no motivation to provide the switch of Funfgelder for the watch or watch band of Riener as discussed above.

For the above reasons, Claims 20-28 are believed allowable over the applied prior art.

Further and favorable consideration of this application, and allowance thereof, is respectfully requested.

Respectfully submitted,

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